

## **REMARKS**

### ***Summary of Changes Made***

By this Amendment, claims 1, 2, 4, 7, 11, and 12 have been amended. Hence, claims 1-12 remain pending in the present application. The transitions of claims 1, 4, and 7 have been amended from "comprising" to "consisting essentially of," and each claim now positively recites the presence of BaO. Claim 2 has been amended to amend a typographical error. Claim 10 has been amended to eliminate an indefinite term. Claim 11 has been amended to fully independent form. Claim 12 has been amended to eliminate the modifier "conventional." No new matter is added by this Amendment.

### ***Claim Rejections – 35 U.S.C. § 112***

Claims 10 and 12 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner believes that the phrase "*gres porcellanato*" in claim 10 is neither defined by the specification nor known in the art. Further, the Examiner asserts that the meaning of the term "conventional" in claim 12 changes over time, hence the scope of the invention sought to be protected cannot be determined.

The phrase "*gres porcellanato*" is known in the art. It is an Italian term, and is also known in English as porcellanic gres or porcellainized gres, and in Spanish, as porcelanico gres. It is often translated into English as Italian porcelain. Nevertheless, in the interest of moving the application forward toward a Notice of Allowability, Applicants have amended claim 10 to eliminate the phrase and replace it with "single." It is believed that this approach clearly defines the claim subject matter sufficiently to overcome the rejection.

Looking to the rejection of claim 12 based on the use of the phrase "conventional ink," the Examiner will note that Applicants have deleted the word "conventional" from the claim. It is believed that this response overcomes the rejection.

***Claim Rejections - 35 U.S.C. §102(b) (Nigrin)***

The Examiner rejected claims 1-6 under 35 U.S.C. 102(b) as being anticipated by Nigrin, U.S. Pat. No. 4,282,035. The Examiner contends that Examples 1-11 and 14-25 anticipate the glass frit and glaze composition recited in instant claims 1 and 4, while examples 1, 13, 14, 16, 19, 20, 22, 23, and 25 anticipate the instant compositions of claims 2, 3, 5, and 6 in view of the latitude in interpreting a range preceded by the word "about."

The Examiner will note that claim 1 has been amended to replace the transition "comprising" with "consisting essentially of." Hence the scope of claim 1, and claims 2-6 that depend therefrom, covers only recited elements and only those non-recited elements that do not change the basic and novel characteristics of the invention.

Because the Nigrin patent is focused on producing lead-free and cadmium-free frits, certain oxides are necessary to achieve the objectives of that patent. Because the Nigrin compositions lack lead, they must contain low melting, easily fusible frits such as SrO, Bi<sub>2</sub>O<sub>3</sub> and Li<sub>2</sub>O. The Nigrin compositions are intended for use in tableware and utensils for cooking and eating, see col. 1, ll. 59-63.

In contrast, the instant specification clearly indicates that, while the use of SrO, Bi<sub>2</sub>O<sub>3</sub>, and Li<sub>2</sub>O is contemplated, it is intended that such oxides are used in very low amounts, i.e., 0.5% or less of SrO and Li<sub>2</sub>O; the use of Bi<sub>2</sub>O<sub>3</sub> is not contemplated. Hence, the phrase "consisting essentially of" in claim 1 is intended to exclude the use of more than about 0.5 % each of SrO, Bi<sub>2</sub>O<sub>3</sub> and Li<sub>2</sub>O. It is believed the amendments to claims 1 and 4 patentably distinguish the invention from the Nigrin patent.

***Claim Rejections - 35 U.S.C. §102(b) (Beals)***

The Examiner rejected claims 1, 3, and 7-10 under 35 U.S.C. 102(b) over Beals et al., U.S. Pat. No. 2,918,384, ("Beals"). The Examiner alleges that Example 9 of Beals anticipates the compositions recited instantly in claims 1, 4, and 7. Further, Beals discloses applying the frit compositions to ceramic materials (e.g., wall tile) and firing at 950-1200 °C.

The Examiner will note that claims 1 and 7 have been amended to replace the transition "comprising" with "consisting essentially of." The arguments set forth concerning claims 1 and 7 with respect to Nigrin are applicable here as well.

The Applicants note further that the Beals compositions are intended to produce an opaque glaze coating, col. 1, ll. 46-48. Hence  $\text{TiO}_2$  is used in a relatively high proportion, (6 to 14.7 mol%). Further, Pb, Cd, and Zn (up to 1.3 wt%), may be used, i.e., intentionally added. In contrast, the instant specification makes clear that very little, if any  $\text{TiO}_2$  is used, as evidenced by the lack of a recitation of  $\text{TiO}_2$  in the claims and the assertion in paragraph [0013] that only up to 0.2% of  $\text{TiO}_2$  may be present in the inventive compositions, as well as the title, "Transparent Tile Glaze." It is believed the amendments to claims 1 and 7, together with this argumentation, distinguishes the present invention from Beals, and hence, overcomes the rejection.

#### ***Claim Rejections - 35 U.S.C. §102(b) (Bertocchi)***

The Examiner next rejected claims 1, 4, and 7-10 under 35 U.S.C. 102(b) over Bertocchi et al., U.S. Pat. No. 6,174,608, ("Bertocchi"). The Examiner alleges that Bertocchi's frit A anticipates the frit compositions instantly claimed in claims 1, 4, and 7. Bertocchi also discloses applying the composition to a ceramic and firing at 900-1250°C. The Bertocchi compositions are focused on achieving a highly abrasion-resistant glaze as comprehended by ISO 10545-7, col. 1, ll. 43-45. The finish of that glaze is semi-transparent, and Bertocchi discloses the use of up to 5 wt% of  $\text{ZnO}$ , and up to 5 wt%  $\text{TiO}_2$ , which are at odds with the zinc-free and transparent characteristics of the present invention. It is believed that this argumentation, in addition to the amendments to claims 1, 4, and 7, discussed hereinabove, distinguish the present invention from Bertocchi. The Examiner is invited to revisit his conclusions in arriving at the present rejection.

#### ***Claim Rejections - 35 U.S.C. §103(a) (Bertocchi or Beals)***

Claim 12 stands rejected under 35 U.S.C. 103(a) as unpatentably obvious over Bertocchi or Beals, separately, in view of the knowledge of one skilled in the art. The

Examiner notes that both references disclose glazes for architectural use and admits that neither reference discloses applying an ink to the glaze surface and firing to develop color. The Examiner asserts that "such processes are notoriously well known in the art to form decorative tiles," and concludes it would have been obvious to apply an ink to the glaze of Bertocchi or Beals.

In the obviousness rejections, the Examiner points to no teaching or suggestion contained in the cited prior art to modify them as required to support the instant rejections. Bertocchi does not mention the concept of coloring a ceramic tile, and Beals discloses a general idea that a glass frit can be colored, without disclosing the instantly recited colorants. Hence, the Examiner has not made out a *prima facie* case of obviousness. The suggestion or disclosure either to modify a prior art reference, or to combine two or more references must come from the prior art references themselves; the Examiner may not rely on skill in the art alone to motivate such a modification. See *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999); MPEP § 2143.01. It is believed this argumentation is fully responsive to the rejection and overcomes it.

### ***Claim Objections / Allowable Subject Matter***

The Applicants expressly acknowledge that the Examiner finds the subject matter of claim 11 to be allowable. The Examiner objected to claim 11, because it is dependent on a rejected base claim, and states that claim 11 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner will note that claim 11 has been written in fully independent form, incorporating the limitations of claim 7, the independent claim from which it depends. Applicants respectfully submit that the objection is moot, and claim 11 is in condition for allowance.

***Conclusion***

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 06-0625, our Order No. FER-15138.

Respectfully submitted,

**RANKIN, HILL, PORTER & CLARK LLP**



---

Kenneth A. Clark  
Reg. No. 32,119  
Christopher J. Korff  
Reg. No. 55,342

925 Euclid Avenue  
Suite 700  
Cleveland, Ohio 44115-1405  
(216) 566-9700